

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

U.S.S.N. 10/679,727

Songnian et al.

DIGITAL CAMERA INTERFACE

October 6, 2003

Art Unit: Unknown

Examiner: Unknown

Attorney Docket: DP-310006

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted on the date shown below addressed to: MAIL STOP MISSING PARTS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on:

Kandace Brown 9-14-04
Kandace Brown Date

TRANSMITTAL LETTER

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is in response to the Notice of Omitted Item(s) in a Nonprovisional Application, mailed December 30, 2003, for the subject application. A copy of the Notice is attached.

Attached are the required pages 12, 13, 16 of the specification (description and claims).

Please charge the fee for this Response, if any, to Deposit Account No. 50-0831.

U.S.S.N. 10/679,727 (9/14/04) - 2

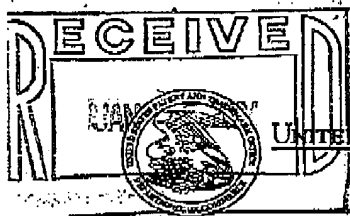
Please charge the three month extension of time fee (\$950) to Deposit Account No. 50-0831.

Respectfully submitted,



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September 14, 2004



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/679,727	10/06/2003	Songnian Li	DP-310006

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CONFIRMATION NO. 2875

FORMALITIES LETTER



OC000000011586699

Date Mailed: 12/30/2003

NOTICE OF OMITTED ITEM(S) IN A NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

A filing date has been accorded to the above-identified nonprovisional application papers; however, the following item(s) appear to have been omitted from the application:

- Page(s) 12,13,16 of the specification (description and claims).

I. Should applicant contend that the above-noted omitted item(s) was in fact deposited in the U.S. Patent and Trademark Office (USPTO) with the nonprovisional application papers, a copy of this Notice and a petition (and \$130.00 petition fee (37 CFR 1.17(h))) with evidence of such deposit **must** be filed within **TWO MONTHS** of the date of this Notice. The petition fee will be refunded if it is determined that the item(s) was received by the USPTO.

II. Should applicant desire to supply the omitted item(s) and accept the date that such omitted item(s) was filed in the USPTO as the filing date of the above-identified application, a copy of this Notice, the omitted item(s) (with a supplemental oath or declaration in compliance with 37 CFR 1.63 and 1.64 referring to such items), and a petition under 37 CFR 1.182 (with the \$130.00 petition fee (37 CFR 1.17(h)) requesting the later filing date **must** be filed within **TWO MONTHS** of the date of this Notice.

Applicant is advised that generally the filing fee required for an application is the filing fee in effect on the filing date accorded the application and that payment of the requisite basic filing fee on a date later than the filing date of the application requires payment of a surcharge (37 CFR 1.16(e)). To avoid processing delays and payment of a surcharge, applicant should submit any balance due for the requisite filing fee based on the later filing date being requested when submitting the omitted item(s) and the petition (and petition fee) requesting the later filing date.

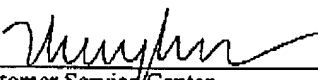
III. The failure to file a petition (and petition fee) under the above options (I) or (II) within **TWO MONTHS** of the date of this Notice (37 CFR 1.181(f)) will be treated as a constructive acceptance by the applicant of the application as deposited in the USPTO. **THIS TWO MONTH PERIOD IS NOT EXTENDABLE UNDER 37 CFR 1.136(a) or (b).** In the absence of a timely filed petition in reply to this Notice, the application will maintain a filing date as of the date of deposit of the application papers in the USPTO, and original application papers (i.e., the original disclosure of the invention) will include only those application papers present in the USPTO on the date of deposit.

In the event that applicant elects not to take action pursuant to options (I) or (II) above (thereby constructively electing option (III)), amendment of the specification to renumber the pages consecutively and cancel incomplete sentences caused by any omitted page(s), and/or amendment of the specification to cancel all references to any

omitted drawing(s), relabel the drawing figures to be numbered consecutively (if necessary), and correct the references in the specification to the drawing figures to correspond with any relabeled drawing figures, is required. A copy of the drawing figures showing the proposed changes in red ink should accompany with any drawing changes. Such amendment and/or correction to the drawing figures, if necessary, should be by way of preliminary amendment submitted prior to the first Office action to avoid delays in the prosecution of the application.

Replies should be mailed to: Mail Stop Missing Parts
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*A copy of this notice **MUST** be returned with the reply.*



Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 1 - ATTORNEY/APPLICANT COPY

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4. The interface of claim 2, wherein at least one of the camera video data formats provides a frame valid (FVAL) signal and a line valid (LVAL) signal, and wherein the camera side link layer combines the FVAL signal and the LVAL signal into a single validation (XVAL) signal that is provided to the host processor side link layer.

5. The interface of claim 4, wherein the XVAL signal corresponds to the LVAL signal with an added end-of-frame (EOF) signal.

6. The interface of claim 5, wherein a pulse width of the EOF signal is less than a pulse width of the LVAL signal.

7. The interface of claim 1, wherein the functionality of the host processor side link layer is incorporated within the host processor.

8. The interface of claim 1, further including:

a low-voltage differential signaling (LVDS) receiver for serial-to-camera (SERTC) channel communications located within the camera side interface, wherein inputs of the LVDS receiver are coupled to outputs of the camera side transmitter and an output of the LVDS receiver is coupled to the camera side link layer; and

an LVDS transmitter for SERTC channel communications located within the host processor side interface, wherein the SERTC channel is provided for reconfiguring the camera, and wherein an input of the LVDS transmitter is coupled to the host processor side link layer and outputs of the LVDS transmitter are coupled to inputs of the host processor side receiver.

9. The interface of claim 8, wherein the cable includes a first pair of signal wires for carrying the video data, and wherein the video data is in the form of a low-voltage differential signaling (LVDS) data stream.

10. The interface of claim 9, wherein the camera side link layer and the host processor side link layer are configured to share the first pair of signal wires to communicate the video data in the desired video signal format and configuration signals for the SERTC channel.

11. The interface of claim 9, wherein the cable further includes:

a second pair of signal wires to communicate configuration signals for the SERTC channel.

12. A host processor to camera interface for a motor vehicle, comprising:

a camera side interface, including:

a camera side link layer coupled to a camera, the camera providing video data, the camera side link layer converting the video data to a desired video data format, wherein the camera is attached to the motor vehicle;

a serializer coupled to the camera side link layer for serializing the video data in the desired video data format; and

a camera side transmitter coupled to the serializer, the camera side transmitter transmitting the serialized video data;

a host processor side interface, including:

a host processor side receiver for receiving the serialized video data;

a deserializer coupled to the host processor side receiver, the deserializer deserializing the serialized video data; and

a host processor side link layer coupled to the deserializer and a host processor, wherein the host processor side link layer is adapted to convert the deserialized video data into a format compatible with the host processor when required, and wherein the host processor is incorporated within an electronic control unit (ECU) of the motor vehicle that is remote from the camera; and

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coupled to the host processor side link layer via the pair of signal lines when the outputs of the deserializer indicate the pair of signal lines are free.

22. The method of claim 21, further including the steps of:
disabling the SERTC channel transmitter and the SERTC
channel receiver and enabling the deserializer and the serializer in response to a
reset message, wherein the reset message is provided by the host processor
sending a reset signal to the host processor side link layer.